Business Process Management

Adam Bosworth, Google

- "Alan Kay is supposed to have said that simple things should be simple and hard things should be possible. It has been my experience over 25 years of software development that for most software products, *simple things should be* **declarative** *and/or* **visual** and hard things should be procedural."

Workflow and Process

"Technical skill is mastery of complexity, while creativity is mastery of simplicity"

- Enterprises Are An Aggregation of Business Processes

- Business Process – Set Of On or More Linked Procedures or Activities Which Realize a Business Objective or Goal

- Formalize Your Processes = Rigidity

- Don't Formalize = Uncontrollable Mess

- Great!

Business Process Management to the Rescue

- Traditional Approach
  - Complex Processes
  - Lack Detail
  - Poor error handling
  - Limited visibility
  - Business Requirements change before you finished coding
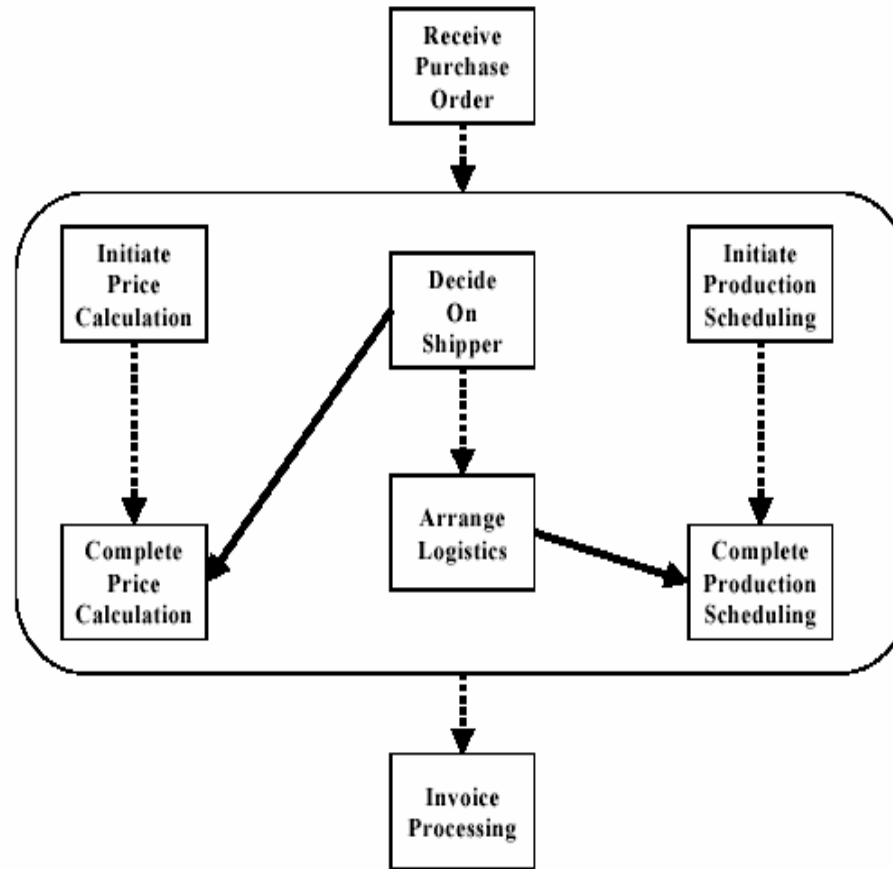
Bit by Bit, Piece by Piece…..

Abstract and compose

- Split the problem up into manageable pieces
- Abstract away from the details
- Compose those pieces graphically
- With the right building blocks you can build anything

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A sample business process

Orchestration vs Choreography

Orchestration

Choreography

A British analogy

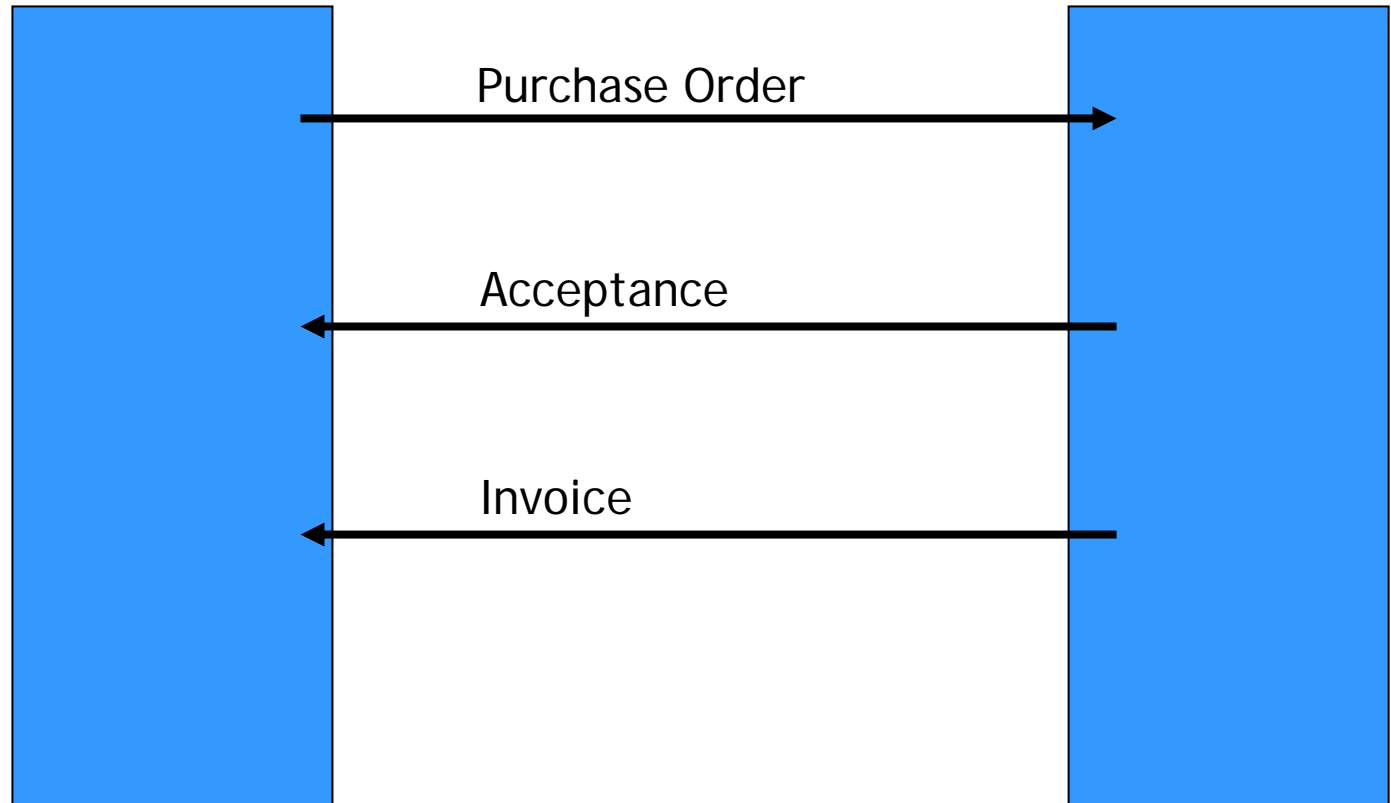http://blog.whatfettle.com/archives/000250.html – Paul Downey's weblog

In words

- ## Orchestration
  - Direct control of the business process by a system – also known as *workflow*

- ## Choreography
  - Loosely coupled definition of how parties interact
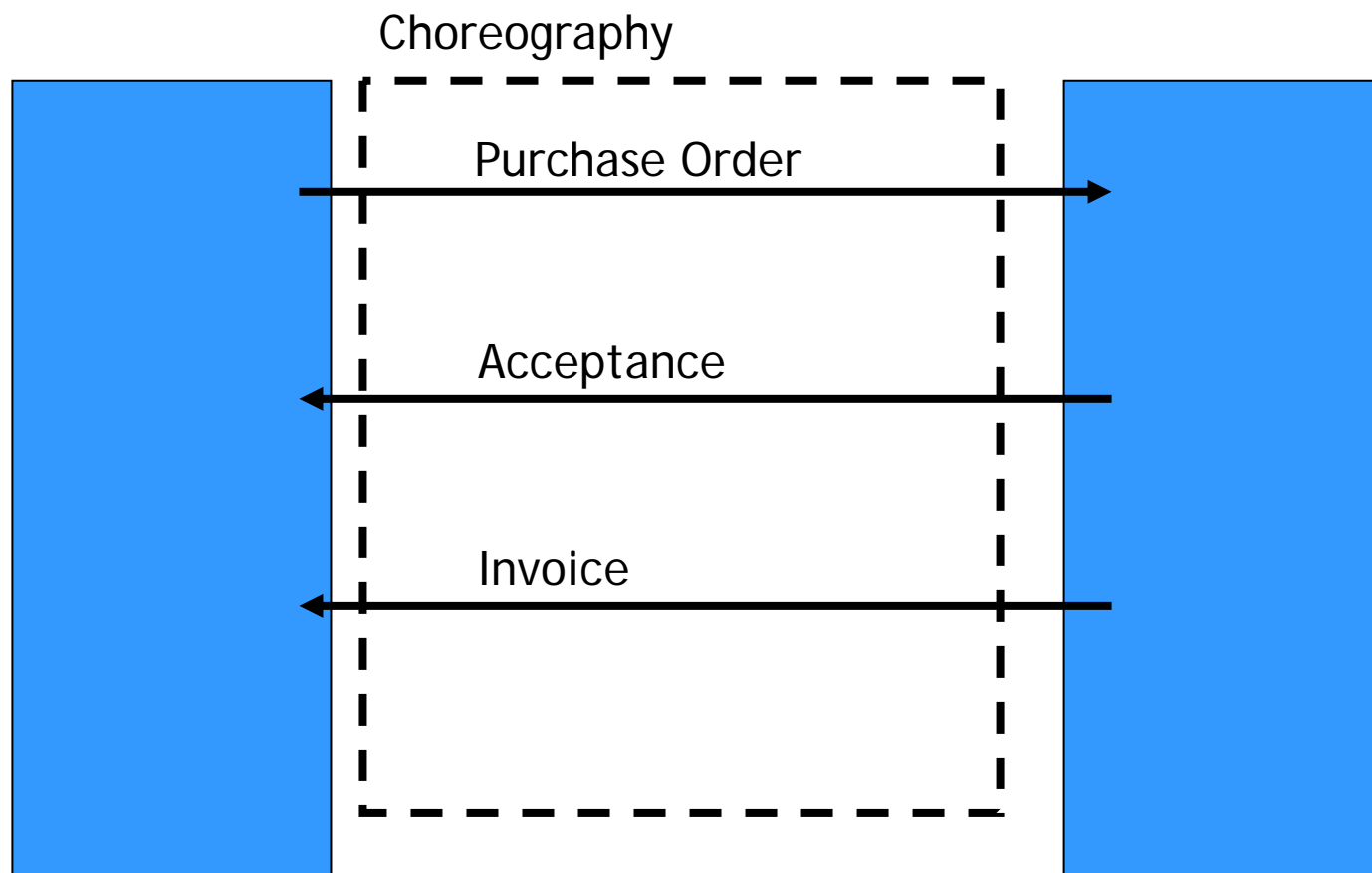 - The interactions between systems not the implementation of those systems

Business Process

Purchase Order →

← Acceptance

← Invoice

Business Process

Choreography

Purchase Order

Acceptance

Invoice

Business Process

Orchestration

Purchase Order →

Receive → Validate

Acceptance ←

Reply ← Process

Invoice ←

Send Inv ← Account

Aims of using Business Process

- Simple model:
  - Use a model that the business understands:
  - Business Process flows are *readable*

- Cleaner architecture
  - Build a layer of abstraction between the *services* and the *process*
  - But the services may be processes themselves!

- Better manageability
  - A process manager should be able to give data to a Business Monitor/Dashboard

- Faster time to market
  - More reuse of existing services
  - Simple graphical modeling

Standards

- Two main contenders
  - Web Services Choreography Description Language
    - http://www.w3.org/TR/ws-cdl-10/
    - A global perspective
  - Business Process Execution Lanaguage
    - http://oasis-open.org/committees/tc_home.php?wg_abbrev=wsbpel
    - A local perspective – orchestration
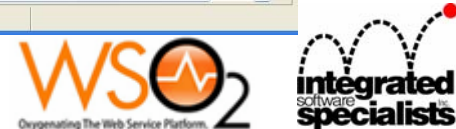   - Some support for choreography (Abstract processes)

Business Process Execution Language

- A specification created by IBM, Microsoft + others
  - BPEL 1.1
- Currently implemented in
  - WebSphere Business Process Server
  - Microsoft Biztalk
  - ActiveEndpoints BPEL server
  - + others
- Submitted to OASIS
  - BPEL 2.0

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integrated
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specialists

What is BPEL?

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BPEL

- Allows organisations to build and deploy robust processes
  - Faster
  - Simpler
  - More maintainable

- Tooling allows analysts to create processes graphically
  - That integrate existing services in the organisation and outside

- BPEL is SOA in action

Business Process Monitoring

- A good Business Process **Manager** also supports Business Process **Monitoring**

- Because the high level process is designed as a loosely coupled flow, its possible to monitor it at a business level

- The result is a business **dashboard**
  - Can identify bottlenecks
  - Help understand how the system is used and how the process is used
  - Monitor the business at the right level
  - A management console for managers

Summary

- Business Process Management
  - Enables faster time to market
  - Re-uses services more easily
  - Helps the business monitor
  - Increases the alignment of IT to the business

Exercise

STOP **Workshop/Hands On**

20 minutes:

1. Identify a business process in your organization
    Or **across** organizations
2. Draw it (any way you like, e.g. flowchart)
3. What are the decision points? Do they need human input?
4. What are the services involved?
5. How often does this process occur?
6. What happens when it goes wrong!?

Questions?

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